

cell, so that said parameter [gets] has a particularly advantageous value in the case of a priority cell.

A2 9. (Amended) A method according to claim 8, [characterized in that] wherein the priority data relating to a terminal comprises at least the priority cell identity (20) and information about [the fact] whether or not the terminal shall apply an offset parameter (17), a delay factor (16) relating to the cell, and cell reselection hysteresis in the calculation of the parameter relating to a priority cell.

10. (Amended) A method according to claim 9, [characterized in that] wherein the terminal does not apply the delay factor relating to the cell nor the cell reselection hysteresis when [it] the terminal calculates the parameter relating to a cell, in a situation where cell reselection represents shifting from a non-priority cell to a priority cell.

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REMARKS

Claims 1-4, 6 and 7 rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al. Further, Claims 1-4, 6 and 7 were rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi et al. Claims 5 and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. Claims 9 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. further, in view of ETSI and ETS 300 535. Claims 5 and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. in view of Wang et al. Finally, Claims 9 and 10

were rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. and Wang et al. and further in view of Lindroth. These rejections are respectfully traversed.

Applicant's invention, as set forth in independent system Claim 1, apparatus Claim 4, and method Claim 6 is directed to a cellular radio system wherein at least one terminal is arranged to favor one cell. In accordance with Applicant's invention as set forth in Claims 1, 4, and 6 this is done in a manner independent of cell selection made by other similarly located terminals. Thus, Applicant's invention provides the unique advantage of not having all terminals in a given location react in the same manner in selecting a cell due to, for example signal strength, or other parameters associated with that location. Instead, each individual terminal selects at least one individual cell based on criteria related to the individual terminal and not in a manner identical to all terminals at that location.

It is respectfully submitted that Applicant's invention, as set forth in independent Claims 1, 4, and 6 is not disclosed or suggested in the art of record.

Wang discloses a two-way paging system where the concept of a CPA or Customer Paging Area is introduced. It is true that e.g. in column 4, lines 34-45, and in column 5, lines 35-36, Wang characterizes the CPA as constituting a list of "preferred" cells. However, Wang has a completely different interpretation to the verb "to prefer" than what is understood by "to favor" or "to prioritize" in the present invention. In the context of Wang, preference or

prioritization means that due to certain frequently occurring behaviour patterns of a the user of a paging device, the paging device appears to be found more frequently in certain cells of a cellular radio system than others. It is very easy to understand that if, for example, the user of a paging device sits eight hours per day at his office, which is typically completely covered by a single paging cell, a large majority of the location update events that occur regularly between the paging device and the system indicate the presence of the device within that particular cell. In the meaning used in Wang, this cell then becomes a "preferred" cell, not because it would be somehow more advantageous for the paging device to operate in, but simply because the user appears to prefer sitting long hours in that cell. In other words, the cellular radio system of Wang monitors the frequency of a certain paging device using certain cells, and composes a statistical model for the probability of finding the paging device from a certain cell at an arbitrarily occurring paging moment.

In the present application the concept of favoring or prioritizing is understood to mean that for one reason or another, a mobile terminal finds it more advantageous to operate within a given cell than for example an immediately neighboring cell. This does not need to have anything to do with the observed or predicted whereabouts of the terminal within the cellular radio system. It is completely possible to define prioritized cells from an area where the terminal has never even been, just to prepare for the possibility that the terminal would go there. Thus, with regard to the present invention, the definition of prioritization is a kind of mirror image of that used by Wang. In Wang, a

certain cell may become a preferred cell if the paging device uses it often. In the present invention, the terminal uses a certain cell often if it has been defined as a prioritized cell. Thus, Wang et al. actually teaches away from the invention as set forth in independent claims 1, 4, and 6.

The reason behind it all is fundamentally different in Wang and the present invention. Wang uses the list of preferred cells to help the network in guessing where the paging device most probably is when it should be paged. Prioritization in the sense of the present invention is meant to guide the mobile terminal to select a certain cell to operate in, when multiple alternative cells are available.

In the context of Wang, it is not the terminal that favors something: the terminal does not have the possibility of selecting between different locations; it is the user of the terminal who chooses to frequent certain physical locations. The rest of the disclosure of Wang relates merely to monitoring and comparing frequencies of use.

One of the features of the Wang solution is that it is the network which collect and processes the "prioritization" information. Also in the present invention, at least in some embodiments thereof, the network has an important role in storing the priority information related to individual terminals and signalling that information every now and then to the terminals concerned. However, this explanation serves to highlight the difference: in Wang the network stores information that describes where the paging device has

actually been, whereas in the present invention the network stores information that describes which selection(s) of a cell would be the most advantageous to the mobile terminal.

Takahashi uses the concepts of home area and roam area, and the objective is to, in a situation where the terminal has the possibility of choosing between the two, make the terminal always select a cell belonging to the home area. However, one should carefully note the definition of the concept "home area" in Takahashi. In column 1, lines 21-36, Takahashi explains that a plurality of cells (or radio zones, as referred to by Takahashi) together constitute a service area. A specific control station controls the operations of all cells belonging to a service area. A common SID or system identification number is assigned to all cells belonging to the service area. The home area of a terminal consists of all those cells that have the SID of the home area.

In selecting a cell, the terminal receives the transmissions from the candidate base stations and decodes the SID. It compares the received SIDS to the home area SID stored in its memory. The selection of the cell is biased towards selecting a cell of which the base station has transmitted a SID matching the stored home area SID.

The definition of service areas in Takahshi implies that according to Takahashi, it is impossible to make a terminal favor a certain cell. The prioritization according to Takahashi takes place on a much higher level so that a terminal is only capable of favoring a certain service area. The immensely wide physical coverage of a service

area, compared to that of a single cell, makes it impossible to have a terminal favor a service area independently of other terminals, since there always is a large number of other terminals for which the same service area has been defined as the home area. Scaling down the service areas to the size of individual cells is not possible since it would dramatically increase the number of required control stations in the network, which would seriously skew the network architecture and cause large increases in hardware cost.

If the disclosure of Takahashi is compared to independent claims 1, 4 and 6 herein, it is apparent that Takahashi does not disclose a method or arrangement where, regarding the setting up and maintaining of radio communication, a terminal would be arranged to favor at least one individual cell with respect to other cells in a manner independent of cell selection made by other similarly located terminals.

In view of the fact that Wang et al. does not disclose prioritization as claimed in the present application, and Takahashi et al does not teach or suggest prioritization at the level of individual cells, it is respectfully submitted that claims 1, 4 and 6 are directed to patentable subject matter.

The remaining claims depend from independent claims 1, 4 or 6. These claims recite further limitations which, in combination with the limitations of the independent claims, are not shown or suggested in the art of record. For the reasons set forth above, it is respectfully submitted that

the dependent claims are also directed to patentable subject matter.

Applicant petitions for a one month extension of time in which to file a response to the outstanding office action. A check for \$110 is enclosed. Please charge deposit account No. 16-1350 for any fee deficiencies with regard to the filing of this Amendment.

It is submitted respectfully that all the claims are now in condition for allowance in that they patently distinguish over the cited art. Accordingly, reconsideration and a favorable action indicating such condition is earnestly solicited.

Respectfully submitted,

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5/15/00  
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